

What is claimed is:

1. A rotary shaft balancer mechanism, for reducing a rotary moment operating on a rotary shaft from members supported by the rotary shaft rotatably supported on one or more shaft supports, characterized by comprising;

5 a cam member fixed to an end of the rotary shaft,  
a cam follower which makes contact with the cam member to follow it up,  
and

a gas spring for elastically energizing the cam follower toward the cam member and for generating on the rotary shaft a balancing rotary moment  
10 canceling at least a part of the rotary moment, via the cam follower and the cam member.

2. The rotary shaft balancer mechanism according to claim 1, wherein the cam member is composed of a disc member having an axial center eccentric to an axial center of the rotary shaft and the cam follower is constructed so as to contact  
15 with the periphery of the disc member.

3. The rotary shaft balancer mechanism according to claim 1, wherein the cam follower is composed of a roller member rotatably mounted to an output member of the gas spring.

4. The rotary shaft balancer mechanism according to claim 2 or 3, wherein a  
20 direction in which the cam follower is elastically energized by the gas spring faces the axial center of the rotary shaft.

5. The rotary shaft balancer mechanism according to any of claim 1 ~ 4, wherein the rotary shaft supports a table in which a work is detachably mounted in an indexer.

25